

1. (Amended) A light emitting device, comprising:

Sub B1

a plurality of organic light emitting diode (OLED) modules electrically connected in series; and

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an alternating current (AC) power source electrically connected to and providing an AC voltage directly to the plurality of OLED modules, said voltage and said current having a waveform characteristic.

2. (Amended) A light emitting device, comprising:

a substrate; and

a plurality of organic light emitting diode (OLED) series groups provided on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series, wherein the OLED modules emit light upon application of an AC voltage supplied directly thereto, and the AC voltage has a waveform characteristic.

- Sub B2*
4. (Amended) A light emitting device, comprising:

a substrate;

a plurality of organic light emitting diode (OLED) series groups provided on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series; and

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a converting circuit that converts an applied AC voltage with a sinusoidal waveform to a converted voltage waveform, and applies the converted voltage waveform to the at least one first and the second conducting lines;

wherein the OLED modules emit light upon application of an AC voltage, at least one first conducting line provided on the substrate, the at least one first conducting

line electrically connected to a first end of each OLED series group, and a second conducting line provided on the substrate, the second conducting line electrically connected to a second end of each OLED series group opposite the first end.

Sub B3?
10. (Amended) A light emitting device, comprising:

a substrate;

a plurality of organic light emitting diode (OLED) series groups provided on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series; and

an alternating current (AC) power source, electrically connected to and providing an AC voltage to the first and second conducting lines;

wherein the OLED modules emit light upon application of an AC voltage, at least one first conducting line provided on the substrate, the at least one first conducting line electrically connected to a first end of each OLED series group, and a second conducting line provided on the substrate, the second conducting line electrically connected to a second end of each OLED series group opposite the first end.

A3
11. (Amended) A light emitting device, comprising:

a substrate; and

a plurality of organic light emitting diode (OLED) series groups provided on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series, and the plurality of OLED series groups arranged in rows of OLED modules;

wherein the OLED modules emit light upon application of an AC voltage, at least one first conducting line provided on the substrate, the at least one first conducting line electrically connected to a first end of each OLED series group, and a second

conducting line provided on the substrate, the second conducting line electrically connected to a second end of each OLED series group opposite the first end.

12. (Amended) A light emitting device, comprising:

a substrate;

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a plurality of organic light emitting diode (OLED) series groups provided on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series;

wherein each OLED module comprises a respective anode and cathode, the OLED modules of each OLED series group are serially connected anode to cathode, the OLED modules emit light upon application of an AC voltage, at least one first conducting line provided on the substrate, the at least one first conducting line electrically connected to a first end of each OLED series group, and a second conducting line provided on the substrate, the second conducting line electrically connected to a second end of each OLED series group opposite the first end.

Sub B47
19. (Amended) A light emitting device, comprising:

a substrate; and

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a plurality of organic light emitting diode (OLED) series groups provided on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series, the plurality of OLED series groups arranged as part of a sign;

wherein the OLED modules emit light upon application of an AC voltage, at least one first conducting line provided on the substrate, the at least one first conducting line electrically connected to a first end of each OLED series group, and a second

conducting line provided on the substrate, the second conducting line electrically connected to a second end of each OLED series group opposite the first end.

20. (Amended) A light emitting device, comprising:

a substrate; and

A4
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a plurality of organic light emitting diode (OLED) series groups provided on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series;

wherein the OLED modules emit light upon application of an AC voltage, at least one first conducting line provided on the substrate, the at least one first conducting line electrically connected to a first end of each OLED series group, a second conducting line provided on the substrate, the second conducting line electrically connected to a second end of each OLED series group opposite the first end, and the series groups are arranged such that first ends of the series groups have alternating polarity with respect to each other.

22. (Amended) A light emitting device, comprising:

a substrate; and

A5
a plurality of organic light emitting diode (OLED) series groups provided on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series;

wherein the OLED modules emit light upon application of an AC voltage, at least one first conducting line provided on the substrate, the at least one first conducting line electrically connected to a first end of each OLED series group, and a second conducting line provided on the substrate, the second conducting line electrically connected to a second end of each OLED series group opposite the first end, and

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cont

wherein each OLED module comprises:

a first electrode;

at least one organic light emitting layer over the first electrode; and

a second transparent electrode over the at least one organic light emitting layer.

Sub 357

26. (Amended) A method of operating a light emitting device, comprising providing an AC square pulse waveform voltage to at least one first conducting line and one second conducting line, the first and second conducting lines being connected to the light emitting device, the light emitting device comprising:

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a substrate; and

a plurality of organic light emitting diode (OLED) series groups provided on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series;

wherein the OLED modules emit light upon application of an AC voltage, the at least one first conducting line provided on the substrate, the at least one first conducting line electrically connected to a first end of each OLED series group, and the second conducting line provided on the substrate, the second conducting line electrically connected to a second end of each OLED series group opposite the first end.

Sub 367

29. (Amended) A method of making a light emitting device comprising:

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providing a substrate;

forming a plurality of organic light emitting diode (OLED) series groups on the substrate, each OLED series group comprising a plurality of OLED modules, the OLED modules of each OLED series group electrically connected in series, wherein

the OLED modules emit light upon application of an AC voltage supplied directly thereto, and the AC voltage has a waveform characteristic.

47. (Amended) A display comprising:

a plurality of organic light emitting diode (OLED) modules arranged to spell out at least one letter or depict an image,

AP wherein each OLED module has a shape of a letter or image.

48. (Amended) A display comprising:

a plurality of organic light emitting diode (OLED) modules arranged to spell out at least one letter or depict an image,

wherein the plurality of OLED modules is grouped into a plurality of series groups, and the OLED modules of each series group are electrically connected in series.

50. (Amended) A display comprising:

AG a plurality of organic light emitting diode (OLED) modules arranged to spell out at least one letter or depict an image,

wherein the plurality of OLED modules are electrically connected in parallel.

REMARKS

The Office action dated July 18, 2002 and the cited references have been carefully considered.

Status of th Claims